



PATENT ABSTRACTS OF JAPAN

(11) Publication number: **06181346 A**
 (43) Date of publication of application: **28.06.1994**

(51) Int. Cl. **H01L 41/107**
 // H03H 9/56

(21) Application number: **04165203**
 (22) Date of filing: **24.06.1992**

(71) Applicant: **NEC CORP**
 (72) Inventor: **UEHARA KANEO**
INOUE TAKESHI

**(54) PIEZOELECTRIC PORCELAIN
 TRANSFORMER FILTER**

(57) Abstract:

PURPOSE: To enable a transformer filter to be substituted with a piezoelectric porcelain transformer filter by a method wherein two piezoelectric porcelain transformer filters all polarized in opposite directions to each other are used, and the high impedance parts and low impedance parts of the transformer filters are connected together respectively.

CONSTITUTION: Impedance parts are polarized in opposite directions (shown by arrows). When a high voltage of the same frequency as the resonant frequency of thicknesswise vertical vibrations is applied between the input terminals 16 and 17 of high impedance parts, all piezoelectric porcelain transformer 10 is mechanically resonated owing to the reverse piezoelectric effect of the high impedance parts, and a voltage of the same frequency with an input volt-

age is generated in low impedance parts. At this point, a voltage between an output terminals 14 and 15 is lower than that between the input terminals 16 and 17 due to an impedance difference between an input and an output side. Furthermore, various voltages can be optionally outputted by changing the electrodes 12 of the low impedance part in gap.

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